

Topics covered:

1. Vitamin B12, Folic Acid, and Megaloblastic Anemia

Be sure to understand a) the details of key pathways & b) how all the pathways fit together.

What is the overall purpose of the pathway coupling folic acid, B12, and the synthesis of SAM?

How do B12 deficiency and folic acid deficiency both give rise to megaloblastic anemia?

How could folic acid deficiency affect nucleic acid metabolism?

2. Vitamin C

What is this vitamin for?

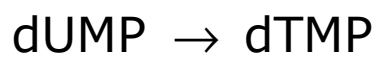
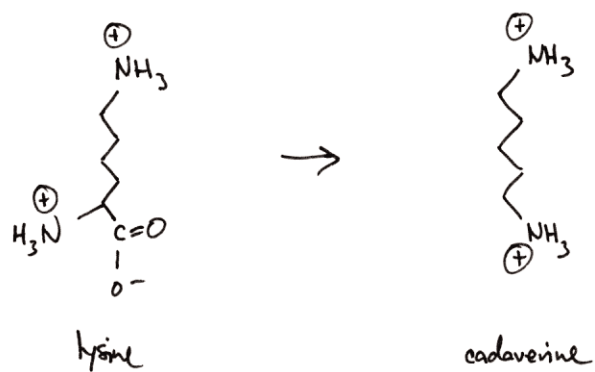
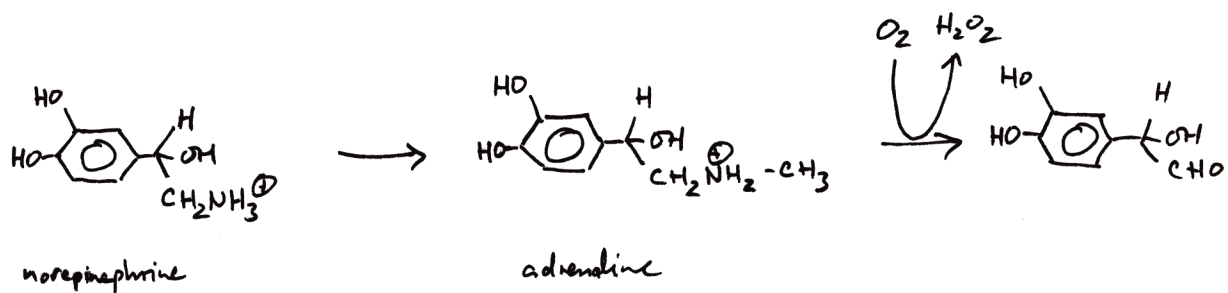
3. Vitamins involved in Energy Generation & Amino Acid Metabolism

Each vitamin has a specific purpose in life. Do you know what it is? Can you recognize its reactions? (If not, you would have missed questions on previous exams written by me.)

Do you know what each vitamin looks like? That is, do you know what its general structural features are?

Some example questions:

Which vitamin participates in each of these reactions:



4. Fat Soluble Vitamins

Vitamin D synthetic pathway

Vitamin K cycle

Vitamin A forms

5. Minerals

Calcium regulation

Selenocysteine incorporation pathway

Regulation of iron metabolism

6. Oxidation

Vitamins, Minerals, Reactive Oxygen Species

7. Vision

Overall activation & inactivation pathways & mechanisms

Color vision